



**United States Environmental Protection Agency
Region 1 - EPA New England
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Subject: Duhamel Farm Partnership – Inspection Report

From: Lisa Thuot (OEME)

Reviewed by: Andrew Spejewski (OES)

To: File

I. Facility Information

A. *Facility Name:* Duhamel Farm Partnership

B. *Facility Location:* 107 Franklin Road
Highgate, VT 05459

C. *Facility Contact(s):* Jim Duhamel, Owner
(802) 868-4954

D. *NPDES ID Number:* None

II. Background Information

A. *Date and time of Inspection:*

Arrive at Facility: August 3, 2016 @ 1240

Exit Facility: August 3, 2016 @ 1550

B. *Weather Conditions:* Sunny, 85°F. No rain in the days prior to inspection.

C. *US EPA Representative(s):* Lisa Thuot, Compliance Inspector (OEME)

D. *State Representative(s):* Trevor Lewis, VT Agency of Agriculture
Tyler Knapp, VT Agency of Agriculture
Clark Parmelee, VT Agency of Agriculture

E. *Federally Enforceable Requirements Covered During Inspection:* 40 CFR §122.23

III. Type and Purpose of Inspection

The purpose of the inspection was to assess applicability of the Concentrated Animal Feeding Operation requirements under the Clean Water Act at 40 C.F.R. Part 122.23. The inspection was requested by the EPA Office of Technical Enforcement.

IV. Inspection Information

Entry Procedures:

The inspection was announced in advance by telephone voicemail message on July 28, 2016 to Mr. Duhamel's residence. Upon arrival at the farm, I presented my inspector credentials to Mr. Duhamel and explained the purpose my visit. Prior to walking around the farm, I disinfected my boots to comply with EPA Biosecurity procedures. Mr. Duhamel granted us [me and the 3 Agency of Agriculture representatives] access/permission to start walking around the farm without him, because he needed to finish a task. He joined us about thirty minutes later.

Facility Background:

The information documented in this section is from statements by Mr. Duhamel and inspector observations.

- Duhamel Farm Partnership ("the farm") is owned by Mr. Duhamel and his wife.
- The farm maintains 400 mature milking and dry cows. Mr. Duhamel also operates a heifer facility on VT Route 78, just west of the main farm, which houses 140 heifers/youngstock.
- The farm has coverage under the Vermont Agency of Agriculture's Medium Farm Operations (MFO) permit.
- The main farm has 2 freestall milking barns, 1 freestall heifer barn, 1 large manure pit, and 2 silage bunkers. The manure pit was expanded about 3 years ago through NRCS funding and state engineering design assistance.
- The heifer facility on VT Route 78 has 2 barns, a barnyard, 2 small manure pits, and 1 silage bunker.
- The farm has 425 tillable acres for crops and manure application. There is also an on-site mortality compost pile.
- A leachate collection system was installed for the silage bunkers at the main farm about 2-3 years ago.
- At the main farm, the nearest waterway is an unnamed [riverine wetland] stream along the northeast perimeter of the farm. At the heifer facility, there is an unnamed [riverine wetland] stream located immediately east of the farm. These two unnamed streams flow north into the Rock River, which flows into Missisquoi Bay of Lake Champlain.

Facility Tour (at the Main Farm):

- The leachate collection system is a low-flow, high-flow design with a concrete intake bay (photo #1). Low-flow drainage goes into a pipe to a holding tank, where it is pumped to the manure pit through two pipes. High-flow (storm-related) runoff exits through openings in the concrete bay to a vegetated treatment area (VTA) and a small pond (photo #2). Mr. Duhamel said the pond is connected to tile drains that run through the adjacent corn fields. The tile drainage emerges through a culvert on Franklin Road, where it enters a wetland area.

- The pump, which transfers low-flow silage drainage from the holding tank to the manure pit, was off during our inspection. When Trevor Lewis activated the pump, some liquid emerged through a breach in the pipe and flowed downhill toward the tank, where it entered the high-flow VTA (photo #3). We observed only one pipe discharging into the manure pit when the pump was activated. Mr. Duhamel believes a crack in one of the transfer pipes is causing the backflow.
- In one section of the silage bunkers, some excess leachate was not reaching the collection system because the feed pile extended beyond the bunker wall; the leachate liquid was flowing into a drainage swale next to the corn field (photo #4). Trevor Lewis suggested curbing, a concrete wall, or a berm to direct the leachate flow away from the drainage swale and into the collection system.
- The mortality compost pile was situated on dirt road between corn fields. Some leachate from the pile was leaking from the road into one of the corn fields, but we did not observe a discharge of leachate to a waterway.

Facility Tour (at the Heifer Facility):

- Leachate/runoff from the heifer silage bunker was draining and pooling in an open grassy field next to manure pit #1 on the farm. We did not observe a discharge to a waterway.
- The barnyard next to the heifer barn is open/uncovered. The barnyard appeared to have been recently cleaned/scraped of manure.

Records Review:

- The farm has a nutrient management plan (NMP) prepared by Farm Compliance Services (FCS) of Vermont.
- The NMP required updating; manure tests were missing from the NMP, and the last soil tests were done in 2012.
- Manure spreading records were up-to-date. The farm exports some manure, but does not import any manure.

The Vermont Agency of Agriculture checked three crop fields to measure vegetation buffers with the banks of adjoining surface waters, which must be a minimum of 25 feet as defined in the VT MFO permit. The first crop field had a buffer of slightly less than 15 feet, and two other crop fields had a buffer of greater than 25 feet.

V. Exit Briefing

An exit briefing was conducted with Mr. Duhamel. Trevor Lewis, Tyler Knapp, and Clark Parmelee of the VT Agency of Agriculture were also present. The following items were noted:

- At the main farm, the breach in the transfer pipe between the low-flow tank and the manure pit needs to be repaired, so concentrated silage leachate does not flow into the high-flow vegetated treatment area.
- At the main farm, leachate from one area of the silage bunkers which was not reaching the collection system must be contained or channelized away from a drainage swale.
- The farm's NMP required some updating.

End of Report

Report Attachments:

Inspection photos

Aerial photo map